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ABSTRACT

As the information age expands, the most acute problem will not be information overload, but the gap between those individuals who can function in the information society and those who cannot. The haves of the computer society will be those who know the capabilities and limits of the technology. The have nots will be those who fear to know, refuse to know, or do not have the ability to learn. A judicious application of interpersonal communication principles can help anyone deal with the computer revolution in a productive and beneficial manner. For example, the role of goals and values is central to effective interpersonal interactions. People must feel as well as think. The computer can only help with cognitive activities and should be considered a tool, nothing more. Beyond extolling the virtues of a good course in interpersonal communication along with courses in computer and computer literacy, the speech communication professional needs to address at least three other issues of concern to the entire profession. Of paramount importance is a position on "communicating" with computers. Speech communication must lead the fight for greater accuracy of expression when describing computer activities as well as person/computer activities. Second, they must take the lead in stressing the importance of person-to-person contact in order to remain human. Finally, they must emphasize the fact that computers lack emotion and are incapable of replicating human feelings. (HOD)

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THE HAVES AND THE HAVE NOTS OF A COMPUTER SOCIETY

A Paper Presented at the

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by

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ABSTRACT

THE HAVES AND THE HAVE NOTS OF A COMPUTER SOCIETY

In a post-industrial information age, the computer is making rapid advances into every facet of society. According to the April 1981 issue of Futurist, by the year 2000, 66% of all jobs will be in the area of information services. Computerization will be at the foundation. Though inevitable, computerization is encountering resistance much the same way industrialization was resisted. From upper level management to the secretarial pool, the war between the haves and the have nots has begun.

In an industrial era, poverty was marked by the absence of things. Most resources had one thing in common--if one person had them, another did not. However, in an information society, the computer makes ownership of information difficult, if not impossible. Information as a resource, when shared with another, becomes the property of both. The computer makes information the great equalizer.

As the information age expands, our most acute problem will not be information overload. The number one crisis point will be the gap between those computing literate individuals who can function in the information society and those who cannot. With continual failure to respond by our educational system, we could see an entire class of "new disadvantaged" through computer illiteracy.

The coming of computerization must bring with it renewed emphasis on the development of interpersonal communication skills. We must not devalue the qualities of being human but identify the computer for what it is--the most significant tool ever developed by man. The speech

communication profession offers the "high-touch" for the "high-tech" age, and provides an avenue for reducing the inevitable gap between the haves and the have nots.

THE HAVES AND THE HAVE NOTS OF A COMPUTER SOCIETY

"Other than such sweeping events as world wars, political revolutions, or the increasingly visible limitations of our natural environments, probably no factor in our society will have more influence on our future than the revolution now taking place in methods of human communication" (Williams, 1984, p. 318). Williams continues to make an even more sobering point when he asserts, "(t)he ultimate revolution in communication is not so much in the technologies themselves but in their social consequences" (p. 319).

"The industrial revolution touched virtually every segment of our society--rich and poor, male and female, captains of industry and workers alike. If there is anything to be learned from history, we must learn the lessons of change that come with changing technology and its impact on such a broad and diverse number of people, places and things" (Goldberg, 1084, p. 282). The "generation gaps" and "communication gaps" of the past could be minuscule when compared to the "information gap" between those who have access to information and those who do not have access to information in the information society.

The following data from the April, 1981 issue of Futurist relative to jobs, past and future, dramatically illustrates a significant trend taking shape for the year 2000. In 1790 90% of the populace was employed in agriculture; in 1920 53% worked in manufacturing; and by

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1950 30% of the labor force was working in service related industries. By the year 2000, the employment picture could look like this:

2% agriculture

22% manufacturing

10% services

66% information, education enterprises.

The problems for the farmer and the factory worker have only just begun. The consequences of not being able to function in the new society will be painful.

While few agree on the ultimate impact of the personal computer on society, the invasion of the computer into business, industry, and education is being met with all the warmth of a snow storm in central Florida. Further, the lack of acceptance transcends the individual's job or role in society. From upper level management to the secretarial pool, the computer is looked upon as a threatening alien from another world. The war between the haves and the have nots has already begun.

Walter Kiechel (1983), writing in Fortune, observed that as of 1982 less than 10% of all executives and professional managers use the computer themselves, and the prospects of that figure going up were slim. Kiechel explains his observation with six reasons why top managers are slow to be seduced into computer usage.

First of all, they consider computer literacy too technical for them to grasp to the point that a new kind of

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phobia, "technophobia," has emerged (Kiechel, 1983). Secondly, they are concerned with loss of status; being seen at a keyboard, typing, doing secretarial work. Thirdly, managers see computers as a threat to their performance standards, and they experience a natural anxiety wondering whether they can live up to everyone's expectations (including their own) in this age of processed information.

Fourthly, managers see computers as a threat to their roles within the organization of which they are a part. One of management's primary concerns is the fifth reason for being slow to computerize--the nature of their work is not suitable for computerization. Walter Kotter, author of The General Manager, says, "most executives don't spend much time with routine, highly verifiable facts, but rather with ambiguities" (as reported by Kiechel, 1983).

A final concern of managers is the time necessary to learn to use the computer and become computing literate. Most are not willing to give up the 80-100 hours necessary to become an efficient user.

As personal computers become simpler to use and as more people "test drive a Macintosh," the reticence explored by Kiechel will break down for the "haves." In the final analysis, managers, educators, and employees must learn to be adaptable, to survive. Those who can, will "lead" corporations into the 21st century or at least make a meaningful contribution to the success of their business. Paul A. Strassman, vice-president of Xerox said, "people

7 BEST COPY AVAILABLE

lower in the organization will take over much of the manager's work, in integrating information--pulling it together, getting consensus on what it means. As a result, executives will have to contend with less information than before, and they will be forced to spend more time honing their interpersonal skills, motivating people, in short, acting like leaders" (as reported by Kiechel, 1983). Educators will also face the threat of obsolescence. "Recent history has demonstrated that free enterprise in the private sector can and will effectively replace a public service when that service is no longer perceived as effective or appropriate" (Koetke, 1984, p.164). In short, those who cannot adapt are destined for extinction.

In addition to management resisting the computer age, workers are rejecting computerization in much the same way they rejected the industrial age. At the beginnings of the industrial revolution, workers would throw their "sabots," a french word meaning "shoe," into the working parts of their machines. From their attempts to destroy machinery in their work place, we get the word sabotage. Shoes did not stop the industrial revolution nor will any form of sabotage stop the information revolution. Those who fail to recognize the inevitable computerization of the information age are somewhat reminiscent of the legendary King Canute of England and Denmark, who reputedly attempted to display his power by commanding the tides to stand still (Cleveland, 1984). Those who resist the information revolution can expect the

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same result as King Canute--being left standing, up to their chin, in what they tried to stop. The haves will prevail over the have nots.

If there is any doubt about the pervasiveness of the information revolution, be prepared for a shock. Possibly the most ominous piece of information about the computer age, to date, is found in the February, 1985 issue of At. It was revealed in a recent USSR five year plan that they intend to focus on teaching personal computer use in the schools. In fact, they have developed an Apple compatible machine--the Agat. The Soviet decision to place computers in the hands of the people is a dramatic shift in policy (Davis, 1985). Is this a mistake? We, in the western world, consider the Soviet people information "poor." What will happen when they are allowed access to a personal information tool which is extremely hard to control by others?

In the industrial era, poverty was marked by the absence of things. Those who "had things" were the most influential. Even information, if hoarded, can be used by the few to control the many. In George Orwell's Animal Farm, when the revolution was complete and the animals had finally overthrown the humans, the pigs were most dominant in establishing the new laws for their recently acquired domain because they had learned to read and write.

However, in the era of information, the computer makes ownership of information difficult if not impossible

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(Cleveland, 1984). Information is unlike any other resource. Most resources, such as coal, uranium, food, clothes, and cars have one thing in common--if one person has them, another does not. Information as a resource, when shared with another, becomes the property of both.

In this post-industrial era, physical resources are united with information, and with the coming of the computer, information can be the great equalizer. For this reason, the Soviet's move to distribute the "red apple" seems most confusing. Now 2 billion traditionally poor can have access to man's greatest resource--information, a resource that cannot be hoarded.

Computerization has and will be a source of confusion. Workers will experience technical frustration, fears of uncertainty with respect to their job security and work load. Management must express understanding of these anxieties as well as allow a sufficient period of time for adoption of change. Workers will make more demands on management's willingness to listen to their fears and concerns. Management will have to demonstrate its' understanding of the role of necessary change for its' organization to function and demonstrate a positive attitude toward change.

In the information society of today and beyond, we must not "lose touch" of the real world of offices, workers, and organizational purposes, a fear expressed by Walter Kleinschrod (1983). Herein would lie the tragedy. For both

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sides must be willing to communicate--now more then ever.

Those who recognize the potential and inevitability of our new world of information see the computer not just as a useful tool but as a necessary one. The changes resulting from American society's movement into an information society may not follow the exact pattern suggested in Toffler's Third Wave(1980) or Naisbitt's Megatrends(1984) but then neither author offers a precise formula for the future. In fact, they both point to broad, general trends rather than to specific time lines for tomorrow's events. However, there is no question our society is changing.

As the information age expands, our most acute problem will not be information overload, as one might expect. The number one crisis point will be the gap between those individuals who can function in the information society and those who can not. The gap between the haves and have nots is even more intimidating when we consider how little our educational system has changed since the country adopted the principle of free public education. In fact, Fred Williams (1984) terms it "the nonrevolution in education" (p. 329). "If we are to keep the American dream alive, one of the highest priorities we must quickly address is the potential problem of computer illiteracy. We could see an entire class of 'new disadvantaged' through such illiteracy. Computers will have a permanent and enduring effect on our country and her people. This impact will be most profound on the poor" (Goldberg, 1984, p. 282). A more productive

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society will result if we all do our part to see that information technology is available to all who can use it--even the poor. People will be educated for the information society and if the school system does not do it--someone will!

The haves of the computer society will be those who know the capabilities and limits of the technology. The have nots, in turn, will be those who fear to know, refuse to know, or do not have the ability to learn. We think a judicious application of interpersonal communication principles will help anyone deal with the computer revolution in a productive and beneficial manner (Gantt, 1984). It is even possible the number of potential have nots can be significantly reduced.

One threat emanating from the machine is the depreciation of self worth. Since the computer can handle complex logical operations with considerable speed and accuracy, we often feel inferior. We then fall into the trap of self-fulfilling prophecy and become convinced that the machine is "smarter" than we are. Then we take the next step--avoidance. However, denial will not change the facts outlined above or forestall the inevitable. In fact, the computer may replace big government in sustaining the self-help movement begun in the 1970's (Naisbitt, 1984).

Our salvation, in either case, is to recognize that a computer can only do what some human has programmed it to do and that it is our tool. We are not really at the mercy of

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the computer. We are only at the mercy of those people who think they are at the mercy of the machine. Remember, the computer is the creation of man, not the reverse. As our tools get more and more complex, we understand ourselves better and better (Gantt, 1984). Floyd Kvamme (1983), an Apple executive, recently made three sage observations: (1) people enjoy creative work and computers are creative tools; (2) computers will improve personal productivity; and (3) computers will become more people-like in the next five years. These three observations take on some degree of power if we remember our General Semantics and do not confuse the thing with the symbol. The computer is a tool of man and not his ultimate replacement.

It is possible we may have to re-evaluate our personal values if we are to preserve our self worth, but then, value clarification is usually a beneficial activity. Being more rational does not require the elimination of feelings but might necessitate a realignment of proportion. We can not allow rationality to replace subjectivity so we must better appreciate the balance. The computer can never improve on the beauty of oceans, mountains, wildernesses, music played by a sensitive performer, nor art produced by a starving painter, potter, or sculptor. Computers do not feel; only people feel. A computer can not care or show empathy. In short, our self worth should not be diminished by a most wonderful and powerful tool which can be used to enhance our humanity rather than destroy it. In truth, only we have

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the power to destroy our humanness (Gantt, 1983). David DeLong (1983) describes a workshop attended by 18 computer users considering the topic: "Computers and Personal Values." Of the six major questions explored by the group and reported in DeLong's account of the workshop, one appears particularly pertinent to those of us in Speech Communication: "What is the impact of computers on our self-esteem and our interpersonal relationships?" (p. 33). While DeLong's report does little to answer this critical question, the workshop participants did generate several ideas which could help anyone deal with the new technology and might give our task force a focal point for work with the issue of the person vs. the computer. The following suggestions from the group appear, in my mind, to weigh most heavily on the role of Speech Communicators:

--Sense both dangers and opportunities concerning the use of computers.

--Retain a hold on human goals.

--Balance computer and other activities.

--Be open about our knowledge--and our ignorance.

--Live a "sober" life, avoiding computer intoxication.

--Ask: What portion of my life does my computer deserve?

--Avoid fleeing to the computer when personal relationships are unsatisfactory.

--Strive to reconcile work with computers and self-image.

--Stay aware of data accuracy and reliability (p. 35).

While there are numerous issues imbedded in the above

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suggestions, some stand out more than others for the communication professional. For example, the role of goals and values is central to effective interpersonal interactions. People must feel as well as think. The computer can only help with cognitive activities and should be considered a tool, nothing more.

A second example comes from those persons who turn to the computer because their relationships with people provide less than satisfactory results. Maybe we need to do more to extol the virtues of a good course in interpersonal communication along with courses in computer and computing literacy.

We believe the communication profession needs to address at least three issues, because the following issues are of the utmost concern to the entire profession (Gantt, 1984a).

Of paramount importance to the profession is a position on "communicating" with computers. Since the machine can neither "talk" nor "think," we must lead the fight for better accuracy of expression when describing computer activities as well as person/computer activities. We diminish our own humanity and that of others most often without considering the accuracy or appropriateness of our language.

Second, we must take the lead in stressing the importance of person-to-person contact in order to remain human. We know that people who have lived with animals have become more animal-like. The inescapable, yet frightening

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corollary would be--people who live with machines will become machine-like.

Finally, the fact that computers lack emotion and are incapable of replicating human feelings must be emphasized. Emotions are a part of living. Without feelings, there is no joy in living. The conclusion of the whole matter is this--computers can neither evaluate nor produce emotion. This fact alone will keep man apart from the machine through at least the year 2001.

The plot of the highly successful movie War Games is indeed plausible if we invest machines with human qualities and behave as though we think the machines are human, or worse yet, an errorless super-human. The communication profession should lead the professional world in cleaning up our language and encouraging productive people/machine relationships with the computer--the most significant tool ever developed by man (to date). The speech communication profession offers the high-touch for the high-tech age as well as the methods for reducing the inevitable information gap between the haves and the have nots. Williams (1984) challenges us when he observes "(y)ou can be the shaper or the shaped of the social consequences of tomorrow's new technologies" (p. 334).

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